

Summary Data

Road Crashes

Fatal	348
Injury	10943

Casualties

Deaths	391
Injuries	15174

Casualty Rates

Deaths per 10,000 vehicles	1.3
Injuries per 10,000 vehicles	49
Deaths per 100,000 population	9.4
Injuries per 100,000 population	367

Contents

	PAGE
Reported Injury Crashes 2006	5
National Health Statistics for Road Users	115
Breath and Blood Alcohol Statistics	125
Blood Alcohol Levels for Fatally Injured Drivers	137
International Comparisons for Road Deaths	149
Road User Behaviour Surveys	163
Driver Licence and Vehicle Fleet Statistics	171
Legislation	175

Reported Injury Crashes

2006

Contents

Tables

<u>Section 1</u>	<u>Historical</u>	<u>Page</u>
Table 1	Casualty Rates Historical	17
Table 2	Crash Rates Historical	20
Table 2A	Crash Severity Historical	21
Table 2B	Crashes and Casualties on Open Roads and Urban Roads Historical	21
Table 3	Type of Road User Killed and Injured Historical	22
Table 4	Crashes in Holiday Periods	24
<u>Section 2</u>	<u>Casualties and Crashes</u>	
Table 5	Age and Gender of Road Users Killed and Injured	27
Table 6	Age and Type of Road User Killed and Injured	27
Table 7	Type of Road User Killed and Injured	31
Table 8	Type of Road User Killed and Injured by Speed Limit Area During Daylight and Darkness	32
Table 9	Movement Classification of Crashes and Number of Casualties	33
Table 10	Casualties and Crashes Each Month	34
Table 11	Crashes Classified by Type of Movement	36
Table 12	Movement Classification of Crashes Involving Cars, Rentals, Taxis and Vans	37
Table 13	Movement Classification of Crashes Involving Buses and Trucks	38
Table 14	Movement Classification of Crashes Involving Motorcycles	39
Table 15	Movement Classification of Crashes Involving Pedal Cycles	40
Table 16	Movement Classification of Injury Crashes in Urban and Rural Areas	41
Table 17	Movement Classification of Fatal Crashes in Urban and Rural Areas	41
Table 18	Injury Crashes by Time of Day and Day of Week	42
Table 19	Fatal Crashes by Time of Day and Day of Week	43
Table 20	Light and Weather Conditions Prevailing when Injury Crashes Occurred	44
Table 21	Light and Weather Conditions Prevailing when Fatal Crashes Occurred	44
Table 22	Objects Collided With in Injury Crashes in Urban and Rural Areas	45
Table 23	Objects Collided With in Fatal Crashes in Urban and Rural Areas	46
Table 24	Injury Crashes by Road Feature in Urban and Rural Areas	47
Table 25	Fatal Crashes by Road Feature in Urban and Rural Areas	48
Table 26	Factors Probably Contributing to Crashes	50
Table 26A	Crashes and Casualties where Driver Alcohol was a Contributing Factor	63
Table 26B	Crashes and Casualties where Travelling Too Fast For Conditions was a Factor	63

Section 3 Truck Casualties and Crashes

Table 27	Truck Crashes and Casualties Historical	67
Table 28	Movement Classification of Injury Crashes Involving Trucks in Urban and Rural Areas	68
Table 29	Movement Classification of Fatal Crashes Involving Trucks in Urban and Rural Areas	68
Table 30	Crashes Involving Trucks by Time of Day and Day of Week	69

Section 4 Motorcycle Casualties and Crashes

Table 31	Motorcycle Rider and Pillion Casualties Historical	73
Table 32	Motorcyclist Crash and Casualty Rates Historical	74
Table 33	Movement Classification of Injury Crashes Involving Motorcyclists in Urban and Rural Areas	76
Table 34	Movement Classification of Fatal Crashes Involving Motorcyclists in Urban and Rural Areas	76
Table 35	Crashes Involving Motorcyclists by Time of Day and Day of Week	77

Section 5 Pedal Cyclist Casualties and Crashes

Table 36	Pedal Cyclist Casualties and Population Statistics Historical	81
Table 37	Pedal Cyclist Casualties and Population Statistics by Age Groups	82
Table 38	Movement Classification of Injury Crashes Involving Cyclists in Urban and Rural Areas	83
Table 39	Movement Classification of Fatal Crashes Involving Pedal Cyclists in Urban and Rural Areas	83
Table 40	Crashes Involving Pedal Cyclists by Time of Day and Day of Week	84

Section 6 Pedestrian Casualties and Crashes

Table 41	Pedestrian Casualties and Population Statistics Historical	87
Table 42	Pedestrian Casualties and Population Statistics by Age Groups	88
Table 43	Injury Crashes Involving Pedestrians by Road Feature in Urban and Rural Areas	89
Table 44	Fatal Crashes Involving Pedestrians by Road Feature in Urban and Rural Areas	90
Table 45	Crashes Involving Pedestrians by Time of Day and Day of Week	91

Section 7 Local Body Casualties and Crashes

Table 46	Crashes and Casualties by Population Centre	95
Table 47	Pedestrian, Motorcycle and Pedal Cycle Crashes by Population Centre	96
Table 48	Local Body Crashes and Casualties	97

Section 8 Drivers Involved In Reported Injury Crashes

Table 49	Drivers Involved in Fatal Crashes by Age and Vehicle Type	103
Table 50	Drivers Involved in Injury Crashes by Age and Vehicle Type	103
Table 51	Car and Van Drivers Involved in Fatal Crashes by Age Group Historical	104
Table 52	Car and Van Drivers Involved in Injury Crashes by Age Group Historical	104
Table 53	Car and Van Drivers Involved in Fatal Crashes by Age Group and Sex Historical	107
Table 54	Car and Van Drivers Involved in Injury Crashes by Age Group and Sex Historical	107
Table 55	Percentage of Crash Involved Drivers with Alcohol Recorded as a Factor.	109
Table 56	Percentage of Crash Involved Drivers with Too Fast for Conditions Recorded as a Factor.	109
Table 57	Percentage of Crash Involved Drivers with Failed To Give Way Recorded as a Factor.	109

Section 9 Ethnicity

Table 58	Drivers Involved in Crashes by Ethnicity and Crash Severity	113
Table 59	Casualties from Crashes by Ethnicity and Crash Severity	113

Figures

Section 1 Historical

Figure 1	Road Deaths	18
Figure 2	Deaths per Vehicle and per Capita	18
Figure 3	Reported Injuries	19
Figure 4	Injuries per Vehicle and per Capita	19
Figure 5	Proportion of Deaths by Road User Type	23
Figure 6	Proportion of Injuries by Road User Type	23

Section 2 Casualties And Crashes

Figure 7	Percentage of Road Deaths by Age and Gender	28
Figure 8	Percentage of Road Injuries by Age and Gender	28
Figure 9	Percentage of Road Deaths by Age and Road User Type	29
Figure 10	Percentage of Road Injuries by Age and Road User Type	30
Figure 11	Type of Road User Killed and Injured	31
Figure 12	Movement Classification of Crashes.	33
Figure 13	Percentage of Road Injuries by Road User Type for Each Month	34
Figure 14	Movement Classification Diagram	35
Figure 15	Injury Crashes by Time of Day and Day of Week	42
Figure 16	Fatal Crashes by Time of Day and Day of Week	43
Figure 17	Factors Probably Contributing to Crashes	49

Section 3 Truck Casualties and Crashes

Figure 18	Casualties from Truck Crashes as a Percentage of All Road Crash Casualties	67
-----------	--	---	---	---	---	----

Section 4 Motorcycle Casualties and Crashes

Figure 19	Motorcyclists as a Percentage of All Road Crash Casualties	.	.	.	.	75
Figure 20	Percentage of All Motorcycle Casualties by Age and Gender	.	.	.	.	75
Figure 21	Motorcycle Casualties by Time of Day and Day of Week	.	.	.	.	77

Section 5 Pedal Cyclist Casualties And Crashes

Figure 22	Pedal Cyclists as a Percentage of all Road Crash Casualties	.	.	.	.	81
Figure 23	Percentage Of Cyclist Casualties By Age And Gender	.	.	.	.	82
Figure 24	Cyclist Casualties By Time Of Day And Day Of Week	.	.	.	.	84

Section 6 Pedestrian Casualties and Crashes

Figure 25	Pedestrians as a Percentage of all Road Crash Casualties	.	.	.	.	87
Figure 26	Percentage of Pedestrian Casualties by Age and Gender	.	.	.	.	88
Figure 27	Pedestrian Casualties by Time of Day and Day of Week	.	.	.	.	91

Section 7 Local Body Casualties and Crashes

Figure 28	Total Casualties by Population Centre	.	.	.	.	99
Figure 29	Casualties per 10,000 Population by Population Centre	.	.	.	.	100

Section 8 Drivers Involved In Reported Injury Crashes

Figure 30	Percentage of Crash Involved Car Drivers by Age and Gender for Fatal Crashes	.	.	.	.	105
Figure 31	Percentage of Crash Involved Car Drivers by Age and Gender for Injury Crashes	.	.	.	.	105
Figure 32	Percentage of Crash Involved Car Drivers in Selected Age Groups - Fatal Crashes	.	.	.	.	106
Figure 33	Percentage of Crash Involved Car Drivers in Selected Age Groups - Injury Crashes	.	.	.	.	106
Figure 34	Male Drivers as a Percentage of all Crash Involved Car Drivers - All Ages	.	.	.	.	108
Figure 35	Male Drivers as a Percentage of all Crash Involved Car Drivers - 15-29 Years	.	.	.	.	108

Introduction and Notes

Introduction

This statistical statement contains tabulations of information coded from Traffic Crash Reports. To put these data into context, the following is a brief description of the process which has resulted in this publication.

When a road traffic crash involves a motor vehicle and results in someone being injured, then the law requires that crash to be reported. However, comprehensive hospital based surveys indicate that only about two thirds of such injury crashes are reported to the Land Transport New Zealand. There may also be a reporting bias by type of road user and by day of week and by hour of day and by region.

When an injury crash is reported it is attended usually by a police officer. The reporting officer's primary duties are to prevent further injury and to help those injured. The next duty is a legal one, to ascertain whether anyone involved in the crash has committed an offence.

After dealing with other duties, this officer completes a Traffic Crash Report (TCR). The TCR is examined and coded by traffic engineers and by administrative staff of Land Transport NZ and this coded information is entered into the Crash Analysis System (CAS). After editing and checking the statistical statement is published.

Notes

1. Under section 22(3) of the Land Transport Act 1998 a driver involved in an accident resulting in death or injury to any person must report the accident in person ... as soon as reasonably practicable, and in any case not later than 24 hours after the time of the accident.
2. During the years 1975 to 1979 a system of crash reporting was used where a preliminary report, containing partial details of each crash, was sent to the Ministry of Transport within 24 hours of the crash or of its being reported. After investigations were completed a final report was supplied. By the time of printing preliminary reports only had been received for a number of crashes. Details of those crashes were incomplete and appeared as "unknown" in the tables. From 1980 the system returned to one report only and as a consequence the number of "unknowns" has reduced.

The following notes give brief explanations of terms used in the tables.

3. **Motor vehicle crash** - Any crash that occurs on a public road that is attributable directly or indirectly to a motor vehicle or its load. Crashes which do not occur on public roads are excluded e.g. tractor crashes on farms are not included. The data in this statistical statement includes only crashes that involve a motor vehicle. A crash between a cyclist and a pedestrian, for example, would not be included.
4. **Fatal injuries** - Up to and including 1974 comprised injuries that resulted in death within 28 days of the crash. From, and including, 1975 they comprise injuries that result in death within 30 days of the crash. This is consistent with the international definition.

Exclusions: There are a number of cases where road deaths or motor vehicle deaths are not included in the official road toll. They include:

Deaths that do not occur on a public road or a road to which the public has access (eg race track or farm paddock).

Deaths that did not result from injuries sustained in the crash (eg. when the coroner determines that a driver died from a heart attack).

Suicide or murder.

Deaths on the road where a motor vehicle was not involved (eg cyclist only crash).

These definitions are in line with the most common international definitions. Although these deaths are excluded from the official road toll a record is kept of the crash details.

5. **Serious injuries** - Fractures, concussion, internal injuries, crushings, severe cuts and lacerations, severe general shock necessitating medical treatment and any other injury involving removal to and detention in hospital.

6. **Minor injuries** - Injuries of a minor nature such as sprains and bruises.
7. **Crash, casualty, vehicles involved** - These terms often cause some confusion. The following example may help to clarify their use. If two motor vehicles collide one motor vehicle crash has taken place. If four people in one of the vehicles were injured and two in the other, then this one crash resulted in six casualties. The number of vehicles involved was two.
8. **Non-injury crashes** - Statistics concerning crashes involving property damage only are not included in this report. The one exception is the total number of such crashes which is recorded in Section 1, table 2a.
9. **Movement classification of crashes** - This is based on the manner in which the vehicles were moving immediately prior to the crash. Bicycles are treated as vehicles for this purpose. These movements are divided firstly into broad classes. These classes are used in the tables in this bulletin. They are then further divided into a series of sub-classes. A diagrammatic representation of the classes and sub-classes is given in Figure 14.
10. **Factors contributing to crashes** - Table 26 lists the factors identified as contributing to crashes (i.e. causes of crashes). On each crash report there may be several factors coded against each vehicle involved in the crash for driver or vehicle faults. In addition there may be a number of factors coded on each report for faults of other road users, weather or other conditions. A crash report which has more than one cause factor coded will appear more than once in this table.

Alcohol factors - The method of coding alcohol factors has been changed in order to get a more accurate recording of this factor in crashes. Because of this the number of alcohol factors shown from 1975 onwards will not be comparable with those of previous years.

11. **Open Road and Urban areas** - In all tables where the terms "**Urban**" and "**Open Road**" are used:

"**Urban**" refers to all speed limit areas of 70 km/h and under and limited speed zones.

"**Open Road**" refers to all speed limit areas of over 70 km/h.

12. **Rounding** - Where percentages are given, these are rounded. This may result in the individual percentages not adding exactly to 100.
13. **Motorcycle / moped** - In this document all mopeds and motorcycles have been included under the one heading of "Motorcycles". For the purposes of registration and licensing a moped has a power output of 2kw or under and a maximum design speed of 50km/h or under.

14. **Holiday periods**

- (a) The Christmas - New Year holiday period is that which begins in December of the year stated. The length of the official holiday period varies depending on where the statutory holidays fall in relation to the weekend. When Christmas Eve and New Year's Eve fall on a week day the holiday starts at 4.00 pm on 24 December. If the holiday begins on a Monday or a Tuesday then it ends at 6.00 am on 3 January (9.6 days). If the holiday begins from Wednesday to Friday then it ends at 6.00 am on 5 January (11.6 days). When Christmas Eve and New Year's Eve fall on a Saturday the holiday starts at 4.00 pm on Friday 23 December and ends at 6.00 am on Wednesday 4 January (11.6 days). When Christmas Eve and New Year's Eve fall on a Sunday the holiday starts at 4.00 pm on Friday 22 December and ends at 6.00 am on Wednesday 3 January (11.6 days).
- (b) The Easter holiday covers the period from 4.00 pm on the THURSDAY to 6.00 am on the TUESDAY.
- (c) Queen's Birthday and Labour Weekends cover the periods from 4.00 pm on the FRIDAY to 6.00 am on the TUESDAY.

15. Statistics recorded and stored from the Traffic Crash Report

(a) Location of crash

Local body name, crash road, nearest side road or landmark and the distance and direction of the crash from that side road or landmark, state highway reference.

(b) Type and Time

Severity of crash (fatal or injury), date, time and day of week, type of collision, vehicle types involved.

(c) Vehicle details - for each vehicle involved

Registration number, type (car, truck, etc.) make and model, year, engine capacity (cm³), warrant/certificate of fitness, parked or reversing, damage (minor, extensive etc), number of passengers and type of tow.

(d) Driver details - for each driver involved whether injured or not

Whether driver owned vehicle, surname, date of birth, sex, occupation, licence number, licence status (current, disqualified etc), driver injury (killed, serious, minor, none), alcohol suspected, factors (causes) assigned to driver and/or vehicle.

(e) Non - driver casualties

Age in years, sex, injury (killed, serious, minor), type (passenger, pedestrian, pedal cyclist etc).

(f) Other

Objects struck, movement classification, non-driver/vehicle factors (causes), speed limit, advisory speed limit, road curvature, road surface (bitumen, metal etc), natural light, street lighting, lanes, road markings, road characteristics (bridge approach, railway crossing, flat road, hill road etc), type of junction, traffic control, weather conditions.

16. Change in vehicle licensing system.

In 1986 the system for licensing vehicles in NZ changed. For this reason there are no currently collected statistics that are directly comparable to those collected prior to this date. From 1986 to 1997 the number of vehicles used in table 1 and table 2 was derived from a model based on historical data and the number of new vehicle registrations each year. From 1998, the first full year with Continuous Vehicle Licensing, vehicle numbers include registered Cars, Vans, Trucks, Buses, Motor Caravans, Motor Cycles and Mopeds, but excludes those with an exempt or restoration licence. See page 174 for a breakdown of the fleet at June 30 for the current year.

